

IN THE CLAIMS:

1. (Currently Amended) Device for measuring the sedimentation rate in biological fluids, and especially the rate of erythrocyte sedimentation in blood samples, comprising:

holders for test tubes containing samples of biological fluids;

agitator devices for agitating said test tubes; at least one detector for detecting the levels

5 inside said test tubes;

~~characterized in that~~ wherein said holders are formed in a continuous flexible member defining a closed path, along which said agitator devices and said at least one detector are arranged.

2. (Currently Amended) Device as in ~~one or more of the previous claims~~ claim 1, ~~characterized in that~~ wherein said agitator devices are arranged and made to induce the oscillation of said holders.

3. (Currently Amended) Device as in claim 1 ~~or 2~~, ~~characterized in that~~ wherein the following are arranged along said closed path:

at least one agitating area, wherein said agitator devices are provided; at least one sedimentation area; and

5 at least one reading area wherein said detector is installed.

4. (Currently Amended) Device as in claim 1 ~~or 2 or 3~~, ~~characterized in that~~ wherein

said flexible member defines a path lying on a substantially horizontal plane.

5. (Currently Amended) Device as in ~~any one of the previous claims~~ claim 1, ~~characterized in that~~ wherein said holders are composed of elements interconnected to form a flexible chain member.

6. (Currently Amended) Device as in claim 5, ~~characterized in that~~ wherein each of said elements comprises a single seat for a respective test tube.

7. (Currently Amended) Device as in claim 5 ~~or 6~~, ~~characterized in that~~ wherein the elements forming said flexible member are connected together by means of couplings that enable consecutive elements to rotate with respect to each other so as to make single elements depart from the plane on which the flexible member lies.

8. (Currently Amended) Device as in claim 7, ~~characterized in that~~ wherein said couplings are composed of spherical joints.

9. (Currently Amended) Device as in claims ~~2 and 4~~, ~~characterized in that~~ wherein said agitator devices are made and arranged to induce the oscillation of said elements forming the flexible chain member, outside the plane on which the flexible member lies.

10. (Currently Amended) Device as in claim 9, ~~characterized in that~~ wherein said agitator devices include guides in which the elements forming said continuous flexible chain member are engaged, thereby causing the oscillation of said elements.

11. (Currently Amended) Device as in claim 10, ~~characterized in that~~ wherein said elements have sliding shoes engaging in said guides.

12. (Currently Amended) Device as in claim 9, ~~10 or 11~~, ~~characterized in that~~ wherein said agitator devices include fixed guides, extending along a portion of the path covered by said flexible member, that are made and arranged so that the elements moving along them are forced to oscillate outside the plane on which said continuous flexible member lies.

13. (Currently Amended) Device as in claim 9, ~~10 or 11~~, ~~characterized in that~~ wherein said agitator devices include mobile guides, extending along a portion of the path covered by said flexible member, wherein said elements forming the flexible member are engaged, said guides being made and arranged to induce, with their motion, an oscillation of the elements attached thereto outside the plane on which the continuous flexible member lies.

14. (Currently Amended) Device as in one or more of the claims ~~9, 10, 11 and 13~~ 2, ~~characterized in that~~ wherein said agitator devices comprise a rotor coaxial to a stretch of the path of said flexible member and provided with elements for engaging the holders that come to

be along said stretch along the path of the flexible member, said rotor being capable of a rotating or oscillating movement around its own axis.

15. (Currently Amended) Device as in claim 14, ~~characterized in that~~ wherein said engaging elements are in the form of guides within which said holders forming the continuous flexible member are slidingly engaged.

16. (Currently Amended) Device as in ~~one or more of the previous claims~~ claim 1, ~~characterized in that~~ further comprising:

a first detector is arranged along said closed path, downstream from the agitator devices, and at least one second detector is arranged further along said path, downstream from a portion of path defining a first sedimentation area.

17. (Currently Amended) Device as in claim 16, ~~characterized by~~ further comprising:

a third detector arranged along said path, downstream from a further portion of path defining a second sedimentation area.

18. (Currently Amended) Device as in ~~one or more of the previous claims~~ claim 5, ~~characterized in that~~ wherein said continuous flexible member comprises a transponder associated with each test-tube holder.

19. (Currently Amended) Device as in claims ~~4 and 18~~ 5, ~~characterized in that~~ wherein each of said elements is associated with a respective transponder.

20. (Currently Amended) Device as in claim 18 ~~or 19~~, ~~characterized in that~~ along said path there are one or more stations for scanning said transponders.

21. (Currently Amended) Device as in ~~one or more of the previous claims~~ claim 1, ~~characterized in that~~ wherein along said closed path there is at least one extractor, for removing the test tubes from said holders.

22. (Currently Amended) Device as in claim 21, ~~characterized in that~~ wherein along said closed path there are two extractors for removing the test tubes from said holders and distributing them in respective containers.

23. (Currently Amended) Device as in ~~one or more of the previous claims~~ claim 1, ~~characterized in that~~ further comprising automatic manipulators are provided for automatically inserting the test tubes in said holders.

24. (Currently Amended) Device as in claim 23, ~~characterized in that~~ wherein said manipulators are arranged and made to collect single test tubes from a rack of test tubes and to insert said test tubes in said holders.

25. (Currently Amended) Device as in ~~one or more of the previous claims~~ claim 1, ~~characterized in that it includes~~ further comprising a setup unit for preparing the test tubes for insertion in said holders.

26. (Currently Amended) Device as in claim 25, ~~characterized in that~~ wherein said setup unit is situated above said continuous flexible member.

27. (Currently Amended) Device as in claim 25 ~~or 26~~, ~~characterized in that~~ wherein said setup unit comprises a reading station for automatically reading labels attached to said test tubes, to ascertain in each case whether they must undergo a measurement of the sedimentation rate of the sample contained therein.

28. (Currently Amended) Device as in claims 24 ~~and 27~~, ~~characterized in that~~ wherein said manipulators are controlled and operated by a central unit as a function of information provided for each test tube by ~~said~~ reading stations, to transfer the test tubes in which the sedimentation rate must be measured from the rack to a corresponding holder.

29. (Currently Amended) Device as in ~~one or more of the claims 25 to 28~~ claim 25, ~~characterized in that~~ wherein said setup unit comprises at least one first conveyor for moving a plurality of racks containing test tubes with samples of biological fluid to analyze.

30. (Currently Amended) Device as in claims ~~27 and 29~~, ~~characterized in that~~ wherein said setup unit comprises a first transfer unit for removing single racks from said first conveyor and transferring them to said reading station.

31. (Currently Amended) Device as in one or more of the claims ~~24 to 30~~ 24, ~~characterized in that~~ wherein said manipulators include a lower push bar coming to bear on the test tubes contained in the racks in order to slide said test tubes partially out of said racks, and a mobile clamp for removing the test tubes from the respective racks and inserting them in
5 corresponding holders in the continuous flexible member.

32. (Currently Amended) Device as in claim 29 ~~at least, characterized in that~~ wherein said the setup unit includes a second conveyor for moving a plurality of racks and a second transfer device for transferring the racks from the second to the first of said conveyors.

33. (Currently Amended) Device as in claim 32, ~~characterized in that~~ wherein the first transfer device transfers the racks from the first conveyor to the reading station and from there to the second conveyor.

34. (Currently Amended) Device as in ~~one or more of the claims 29 to 33~~ claim 29, ~~characterized in that~~ further comprising means for identifying the status of each rack ~~[[are]]~~ associated with at least one of said first and/or second conveyors of ~~the~~ said setup unit.

35. (Currently Amended) Method for measuring the sedimentation rate in biological fluids, and the rate of erythrocyte sedimentation in blood samples in particular, comprising:

an agitation phase, in which test tubes containing biological fluids are agitated;

a sample sedimentation phase; and

5 a phase for reading the level of the sediment inside said test tubes;

~~characterized in that:~~ wherein said test tubes are placed in respective holders forming a continuous flexible member;

said continuous flexible member is advanced along a closed path; and

the single test tubes go through said agitation, sedimentation and reading phases in areas

10 sequentially arranged along said closed path.

36. (Currently Amended) Method as in claim 35, ~~characterized in that~~ wherein said test tubes are agitated by rotating said holders in relation to each other around a substantially horizontal axis.

37. (Currently Amended) Method as in claim 35 ~~or 36, characterized in that,~~ wherein along said path, two readings are taken ~~on~~ of the biological samples in each test tube, the first reading when it leaves the agitation area and the second reading at the end of the sedimentation area.

38. (Currently Amended) Method as in claim 37, ~~characterized in that,~~ wherein after

the reading of the level of sediment, said samples undergo a second sedimentation phase and a further reading of the level of sediment after said second sedimentation phase.

39. (Currently Amended) Method as in ~~one or more of the claims 35 to 38~~ claim 35, ~~characterized in that~~ wherein said test tubes are test tubes for complete blood counts.

40. (Currently Amended) Method as in claim 39, ~~characterized in that~~ wherein said test tubes are sequentially fed to a station for reading the labels attached to said test tubes;

for each test tube, it is ascertained whether the sample contained therein is to undergo a sedimentation rate measurement; and

5 the test tubes in which the sedimentation rate is to be measured are transferred to said holders.

41. (New) Device as in accordance with claim 2, wherein along said closed path are arranged at least one agitating area, wherein said agitator devices are provided, at least one sedimentation area, and at least one reading area wherein said detector is installed.

42. (New) Device in accordance with claim 2, wherein said flexible member defines a path lying on a substantially horizontal plane.

43. (New) Device in accordance with claim 3, wherein said flexible member defines a path lying on a substantially horizontal plane.

44. (New) Device in accordance with claim 1, wherein said holders are composed of elements interconnected to form a flexible chain member.

45. (New) Method in accordance with claim 36, wherein along said path, two readings are taken on biological samples in each test tube, the first reading when the test tube leaves the agitation area and second reading at end of the sedimentation area.